

IN THE SPECIFICATION:

At page 3, please amend the paragraph beginning on line 15 as follows:

--Figure 3 shows the result of an experiment measuring an oil/gas/water mixture phase with a particular coil design, with the impedance shown as a function of the water fraction in a multi phase flow to be determined. This coil design is sensitive for the water content in the mixture over the whole range, i. e. from the oil continuous phase to the water continuous phase. The steep area of the curve represents the transition area between the oil-continuous (left side of curve) and water-continuous phases (right side of curve).--

At page 3, please amend the paragraph beginning on line 35 and ending on page 4, line 21 as follows:

--A sketch of the meter spool pipe principle is shown in the enclosed figure 1. There is shown an electrical insulated liner 10 (a coil pipe) around which excitation and detection coils 12,14 are arranged. The insulated liner may be a pipe prepared of a ceramic, plastic or a peek material and is, with all elements ~~intalled~~installed, arranged to be inserted in fluid flow conducting pipe. The coils 12,14 are protected by a screen (a steel material) 16 enclosing the central pipe section. The space between the screen and the pipe outer surface is filled with an inert material. The purpose of the screen to make resistance to the fluid flow pressure inside the liner 10. Each coil having reference numbers 12 and 14 is used as an exitation coil and a detection coil. The coils are parts of an oscillator unit supplying alternating voltage to the coils. The oscillator frequency is dependent on the inductance and capacitance of each coil. Each coil 12 and 14 includes a different number of coil windings. The coil wires are ~~preferaly~~preferably made of flat Cu-lices (copper), of a rectangular cross section, the thickness of which being up to 40 um in order to avoid any influence of changing resistance as the frequency is changing. This appears in figure 1. The direction of the multi phase flow through the pipe is shown by F.--

At page 4, please amend the paragraph beginning on line 22 and ending on page 5, line 4 as follows:

--Each coil (12 or 14 in figure 1) can be regarded as a parallel coupling between an inductance, a capacitance and a resistance. The capacitance consists of different spread capacitances between the coil windings and an equivalent parallel resistance made up by the resistance in the coil windings and the power loss in the volume of the mixture flowing through the coil. The first one is constant but the second one is dependent on the amount of water in the mixture. The coil is part of a feedback circuit which latches the excitation frequency to the coil's resonant frequency. The current in the feedback loop will then be dependent on the induced power loss in the mixture. The ~~resonance~~resonant frequency can be determined by the number of windings in the coil and the optimal frequency range will be dependent on the current penetration depth and the induced power loss in the multi phase flow mixture. The higher the frequency the higher is the loss and thus the higher is the sensitivity of the meter, but the frequency is limited by the current penetration depth of the induced current in both the mixture and the coil windings.--

At page 5, please amend the paragraph beginning on line 17 as follows:

--The induced loss will be dependent on the conductivity in the water component. By using two different coils with different ~~resonance~~resonant frequencies it is possible to compensate for variation in the conductivity and hence the conductivity of the water can be determined as well.--

At page 5, please amend the paragraph beginning on line 30 and ending at page 6, line 7 as follows:

--The eddy current loss in an infinitely large plate with thickness  $d$  (meter) and electrical conductivity  $\sigma$  (ohm-meter)<sup>-1</sup>, penetrated by a magnetic field  $B$  (Tesla) parallel to the the plate at a frequency  $\omega$ (radians/second), is:

(1)

$$P_0 = \frac{\sigma \omega^2 d^2 B^2}{12}$$

where  $B$  is the rms-value of the penetrating magnetic field,  $\sigma$  the conductivity of the medium and.  $\omega$  the frequency of the magnetic field. The resonance frequency for the

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different coils lays in the region of 2 to 8 MHz and the electrical conductivity in processed water from the North Sea oil is 4-6 (ohm-meter)<sup>-1</sup>.--